

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 50.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000039**Date Inspected:** 11-Nov-2006**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Jiangyin**Location:** Shanghai, China**CWI Name:** Liu Liu**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** N/A**Summary of Items Observed:**

This Office of Structural Materials Quality Assurance Inspector observed welding and quality control functions during procedure qualification testing at the ZPMC facility in Shanghai, Republic of China today.

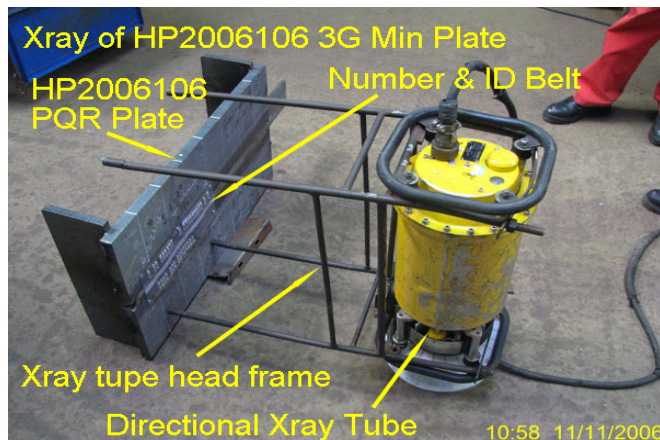
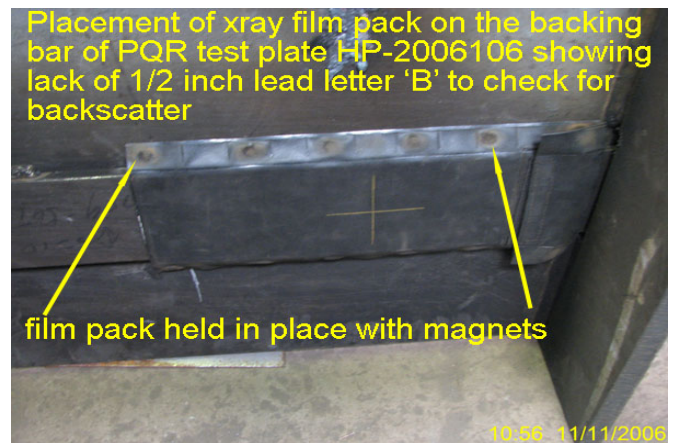
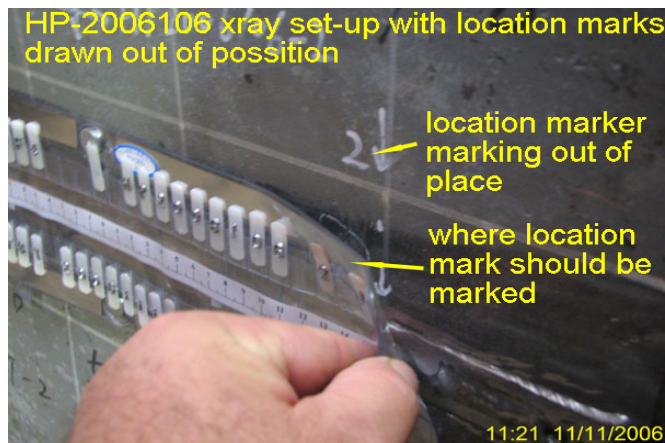
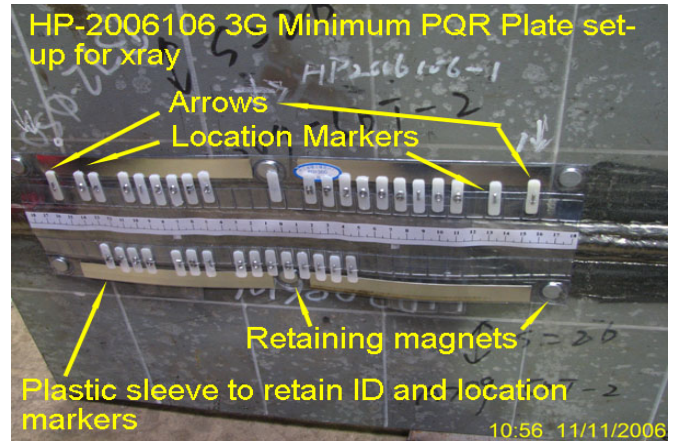
Item	Description	WBS	Dwg No.	Status
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This Quality Assurance Inspector observed the Quality Control Inspector, Mr. Liu witnessing the running of the flux-cored arc welding procedure qualification test HP2006112 in the shop at ZPMC. The test was being run to Paragraph 5.10 for this vertical fillet weld in the 3F position. The welder was Lei Li Chao who was using Hyundai, Supercored 71, and 1.4 millimeter diameter wire with 100% CO2 gas at a flow rate of 20 Liters/minute and welding procedure specification PWPS-B-T-2233. Welding of this 3F procedure qualification was completed at 1000. (See Welding Inspection Report 6032 dated 11-11-2006 for details) The crew started setting up for the running of the gas metal arc welding procedure qualification HP-2006119 however the gas mixture was in questions so welding was not started. X-ray was carried out for the procedure qualification plate HP-2006106 and witnessed by this Quality Assurance Inspector during lunch time today. Two issues of concern were discussed with the radiographers. The first was that there was no lead letter 'B' on the back of the film cassette as required by paragraph 6.10.8.2 of AWS D1.5 (2002). The second issue was where the radiography crew was marking on the weld the location markers with a white paint stick. The crew was marking the location above the number belt instead of at the actual location. This would make it potentially more difficult to locate defects in the weld. These items were discussed with the x-ray crew through Lu Jian Hua who interpreted the conversation for this Quality Assurance Inspector and the X-ray crew.

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Summary of Conversations:

Discussed with Mr. Liu the need for the manufactures recommendations for gas metal arc welding consumables that ZPMC is planning on using for the running of HP-2006119 today. Mr. Liu stated that he had given us the certification paperwork for the wire and the gas, however he would see about getting the rest of the paperwork for us before welding started. Also discussed with Mr. Liu the certification for the shielding gas. The bottle number which they have on hand to use is from Zhen Xin Gas Co., Ltd (ZXG) is 06003220. The inspection reports submitted to quality assurance from Zhen Xin Gas do not show this bottle number; rather they show 060200164434 and 040700223195. Mr. Liu stated that he would look into it. At the end of the day, Mr. Liu

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brought the gas certification for the bottle they intended to use. The Certification stated that the gas mixture was 90% Argon and 10 % CO2 instead of 80% - 20% as previously informed and stated in the preliminary WPS. After talking with ZPMCs technology department, Mr. Liu stated they would like to change the WPS and use the 90-10 mix.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Berger,Bruce	Quality Assurance Inspector
Reviewed By:	Lowry,Patrick	QA Reviewer
